Minnesota Pollution Control Agency

January 18, 1994

Mr. William Taylor
Associate Principal Engineer
Energy and the Environment Corporate
Energy Coordinator
General Mills, Inc.
James Ford Bell Technical Center
9000 Plymouth Avenue North
Minneapolis, Minnesota 55427

RE: September 1, 1993, Meeting Summary

Dear Mr. Taylor:

I am enclosing a summary of the above referenced meeting prepared by John Seaberg. Please let me know if you have any questions or revisions to the meeting summary. Otherwise, I will assume that it accurately reflects the main discussion points at the meeting.

Sincerely,

Dagmar M. Romano
Project Manager
Response Unit I
Site Response Section
Ground Water and Solid Waste Division

DMR:pk

cc: Tom Alcamo, U.S. Environmental Protection Agency

General Mills Meeting
1 September 1993

Name

John K. Seaberg
Dagmar Romano
Larry Sawyer
William C. Crutcher III
Gary W. Olmstead
Allan Gelhus
Diane Salee
Dick Nawlin
Ray W. Wuolo
William Tayl
John Schevenius
Vicki Hagen
Tom Alcamo

Affiliation

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DEPARTMENT : POLLUTION CONTROL AGENCY

STATE OF MINNESOTA

Office Memorandum

DATE : January 6, 1994, (first drafted October 14, 1993)

TO : General Mills File

Thru: Dagmar Romano, Project Manager

FROM : John K. Seaberg, Hydrogeologist
Site Response Section
Ground Water and Solid Waste Division

PHONE : 296-7824

SUBJECT : General Mills Meeting Held September 1, 1993

A meeting was held on September 1, 1993, between General Mills and their legal counsel, Barr Engineering Co. (consultant to General Mills), U.S. Environmental Protection Agency (EPA) and Minnesota Pollution Control Agency (MPCA). The following were in attendance:

MPCA:	Dagmar Romano, John Seaberg
U.S. EPA:	Tom Alcamo
General Mills, Inc.:	William Taylor, Larry Sawyer, William C. Crutcher III, Gary W. Olmstead, Dick Nowlin (legal counsel), John Schevenius, Dick Hagen
Barr Engineering Co.:	Allan Gebhard, Peter Sabee, Ray W. Wuolo

A brief tour of the pumping wells and air stripping tower was held at the site. The group then reconvened for a meeting.

Peter Sabee began the meeting by providing an overview of work conducted at the site over the past year. He said that the Carimona Wells (in the Platteville Limestone) have been operating since November 1985, and are capturing the trichloroethene (TCE) plume to < 27 µg/L. Carimona pump-out well 108 was shut down. The Magnolia Member (of the Platteville Limestone) pumping wells were installed in the fall of 1992, and have been operating for approximately one year.

The narrow plume of contamination in the glacial drift aquifer that extends to the southwest of the site has basically not changed since 1987, and has been contained by the pump out system. Contaminant concentrations in both the Carimona and Magnolia Members of the Platteville Limestone have stabilized, and the plumes are contained by the pump-and-treat system that is in place.

The pump out systems operate at a total cost of $107,000 per year, with approximately $27,000 of that amount going to the annual operation and maintenance. The capital cost for the pump-out system and the air stripper is roughly $200,000 to $300,000.

Peter noted that many other potential sources of contamination surround the site. For example, a documented TCE release occurred a few blocks to the east of the General Mills site, contaminating the glacial drift aquifer. Dick Nowlin said that that area constitutes the earliest principal industrial development area for the Twin Cities.

I provided an introduction for additional aquifer hydraulics work that Barr Engineering conducted. At the time that pumping tests were conducted for Wells MG1 and MG2, Barr reported that anisotropy of the Magnolia Member was observed, but that it could not be quantified. I offered an approach to Barr that appeared to potentially well-suited for the analysis, and that could be applied to the data. Barr reanalyzed the data and Ray Wuolo reported the results. He said that the method worked very well, and that they were able to determine that the difference in the horizontal hydraulic conductivity of the Magnolia Member varied by a factor of approximately ten, depending on the direction in which it was measured. Ray said that Amal Djerrari/Barr applied SLAEM in such a way to create a model that accounts for this anisotropy. The coordinate axis is expanded in one direction (e.g. by a factor of 10) to account for the anisotropy, and the results (e.g. capture zone delineation) are then graphically compressed in the same direction to obtain flow modeling results that account for the anisotropy.

Field data indicate that Magnolia Pump-out Wells MG-1 and MG-2 are more effective in capturing Carimona Unit ground water than was the operation of Carimona Pump-out Well 108.

Dagmar Romano discussed her evaluation of some aerial photos that she has been looking at for the site:

* 1953: The northwest corner of the site appears to have a diked area with tanks and four small waste ponds. Peter Sabee stated that the four "waste ponds" were actually part of a building roof.

* 1957: Few changes were observed, but the "waste ponds" were no longer present.

* 1964: The storage tanks and dike had been removed.

* 1969: The cement slab had been expanded for the drum storage area.

* 1984: Many (400?) drums appear to be stored, with possible spillage. Al Gebhard stated that spillage or leakage was unlikely to have occurred without them noticing and reporting it, since they were heavily involved in on-site activities during that time. He said that the MPCA was also involved during that time (Lisa Thorvig was the OSI and Mike Ayres (sp.?) was the Project Manager).

Bill Taylor stated that when Henckel owned the site, six soil borings had been placed with sampling conducted at five-foot intervals, and that they looked at the entire property even then. Additionally, 300 feet of test trenches were placed along the railroad tracks. The trenches found peat exposed at a depth of seven feet, indicating that the site is located on a filled marsh area. Larry Sawyer said that the work had been done for Henckel under a five-year warranty by General Mills to provide a clean site. The property was sold in 1977 and the trenching was conducted in August of 1981. Al Gebhard stated that MPCA staff were present to observe the trenching. He said that in 1983 the MCPA asked for a pump-out system, not soil removal. In short, General Mills does not see a need for more soil sampling and strongly opposes additional work such as that.

Tom Alcamo discussed conducting a five-year review on the site. Although the site pre-dates SARA, it is now on the NPL and, as with any pre-SARA site, EPA requires a five-year review. He said that they will be evaluating whether or not the remedy is protective and effective. They will also evaluate the presence of potential contaminant sources (if none, then no problem). Additionally, they will evaluate the possible impact of the site on ground water quality in the St. Peter Sandstone. He said that he will likely request all information from the MPCA pertaining to potential contaminant sources. He said that the Inspector General reviewed Minnesota sites and is apparently satisfied with the General Mills site. They could conduct an audit on the site, but it is unlikely. Al Gebhard said that they would like to see about getting off the NPL and onto an operating and maintenance type list instead. Tom said that he will look into delisting the site, or moving it into a different category, and would get back to them.

Bill Taylor said that they would like to reduce costs at the site, and said that there were four areas where cost reductions could be potentially realized:

1. Reporting and monitoring costs.

2. Air stripper. They would like to remove the packing and turn off the fan. The influent to the stripper is already less than 500 μg/L, the level that Bill Taylor said was specified by MPCA in the Consent Order to allow direct discharge to the storm sewer.

3. Delist the site from the NPL. This could mean listing the site under a different category, as described above.

4. Long-term continuity in MPCA staff.

Dick Nowlin said that they would be interested in any ideas that MPCA could offer on how to reduce costs and unnecessary work at the site. MPCA staff suggested that it is the consultant's role to address these issues. MPCA staff will respond to any written request aimed at reducing costs on the part of General Mills.